REMARKS/ARGUMENTS

The Office Action has been carefully considered. Claim 6 is canceled. Claims 1-5 and 7-28 are pending. In the Office Action, claims were rejected in the following manner.

1. Claims 1, 5, and 7-28 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Bates' U.S. Patent No. 6,748,237 (hereinafter *Bates)* in view of Wang's US Published Patent Appl. No. 2004/0199387 (hereinafter *Wang*).

35 U.S.C. § 103(a) Rejections

Claims 1, 5, and 7-28

Claims 1, 5, and 7-28 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Bates)* in view of *Wang*. Applicant respectfully traverses.

To establish a *prima facie* case of obviousness, an Office Action must demonstrate that all claimed elements are taught or suggested by proffered prior art references. In fact, "consideration" of every claim feature is required in an obviousness determination. More specifically, MPEP § 2143.03 indicates that "All words in a claim must be considered in judging the patentability of that claim against the prior art".

Accordingly, before discussing the proposed combination of *Bates* and *Wang* in detail, it is believed that a brief review of the illustrative Claim 1 will be helpful. Claim 1 reads:

A method for a media agent to monitor multiple broadcast transmissions, each broadcast transmission containing media content, comprising:

identifying the broadcast transmission to be monitored;

establishing connections with the identified broadcast transmissions;

identifying, for each connected broadcast transmission, **at least one characteristic of the media content** associated with the connected broadcast transmission **through a statistical pattern recognition scheme, without the need for the media content to include a unique identifier that is derived from, inserted or embedded in the media content**; and

maintaining the association between the identified at least one characteristic of the media content and the connected broadcast transmission.

Thus, Claim 1 identifies at least one characteristic of the media content in a broadcast transmission through a statistical pattern recognition scheme without the need for the media content to include a unique identifier that is derived from, inserted or embedded in the media content.

To render a claim unpatentable, however, the Office must do more than merely "consider" each and every feature for this claim. Instead, the asserted combination of cited references must also teach or suggest *each and every claim feature*. *See In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974) (emphasis added) (to establish *prima facie* obviousness of a claimed invention, all the claim features must be taught or suggested by the prior art).

The failure of an asserted combination to teach or suggest each and every feature of a claim remains fatal to an obviousness rejection under 35 U.S.C. § 103, despite any recent revision to the MPEP. For example, in *In re Wada and Murphy,* Appeal 2007-3733, the BPAI specifically states that:

> "When determining whether a claim is obvious, an examiner must make "a searching comparison of the claimed invention – *including all its limitations* – with the teaching of the prior art." *In re Ochiai*, 71 F.3d 1565, 1572 (Fed. Cir. 1995) (emphasis added). Thus, "obviousness requires a suggestion of all limitations in a claim." *CFMT, Inc. v. Yieldup Intern. Corp.*, 349 F.3d 1333, 1342 (Fed. Cir. 2003) (*citing In re Royka*, 490 F.2d 981, 985 (CCPA 1974)). Moreover, as the Supreme Court recently stated, "*there must be some articulated reasoning* with some rational underpinning to support the legal conclusion of obviousness." *KSR Int'l v. Teleflex Inc.*, 127 S. Ct. 1727, 1741 (2007) (quoting In re Kahn, 441 F.3d 977, 988 (Fed. Cir. 2006) (emphasis added))."

Thus, it remains well-settled law that obviousness requires **at least a suggestion of all of the elements of a claim**. *See In re Wada and Murphy, citing CFMT, Inc. v. Yieldup Intern. Corp.*, 349 F.3d 1333, 1342 (Fed. Cir. 2003) and *In re Royka*, 490 F.2d 981, 985 (CCPA 1974)). Moreover, it is "important to identify a reason that

would have prompted a person of ordinary skill in the relevant field to combine the elements **in the way the claimed new invention does**." *KSR*, 127 S.Ct. at 1741.

Bates merely discloses automated selection of audio broadcast based on user preference criterion. More specifically, an audio advisor in *Bates* monitors an audio broadcast signal in the form of a digital data stream that incorporates streamed data packets carrying audio information representative of an audio broadcast. *Bates* specifically notes that "program information" is embedded within the digital data stream. (*Bates* Col. 2, lines 64-67). Moreover, even when *Bates* extends the scope disclosure to include other forms of audio broadcast, such as analog radio broadcasts, there is still a presumption that "other manners of embedding program information within an audio broadcast signal may also be used" to ensure that program information is embedded in the transmission. (*Bates* Col. 3, lines 5-6). This need for embedded program information in Bates is in direct contrast to Claim 1 of the Application, which requires "identifying...the media content ...without the need for the media content to include a unique identifier that is...embedded in the media content."

In further contrast, *Wang* discloses a system that allows users to identify sounds in noisy and/or distorted listening environments. Excerpts of a sound signal are identified within an audio sample and then compared using "audio pattern-recognition technology" against a database of sounds in *Wang*. ([0063] of *Wang*). *Wang* clarifies that "as little as 5 to 15 seconds of sampling time" may be needed to effect recognition. ([0067] of *Wang*). Landmark time points are identified in *Wang* from the captured sample signal and fingerprints are computed in *Wang* from the captured sample signal at those landmarks. ([0061] of *Wang*). The sample landmarks "find distinctive and reproducible locations within the sound recording" and are selected to "mark the same points within a sound recording despite the presence of noise and other linear and nonlinear distortion" ([0109] of *Wang*). The sample fingerprint of Wang is a value or set of values that summarize a set of features in recording near the timepoint, such as "a single numerical value that is a hashed

function of multiple features." ([0117] of *Wang*). The sample fingerprints are used to retrieve matching sets of song fingerprints, song landmarks, and sound ID values stored in a song database of *Wang*. The sample landmark time points are "scanned for linear correspondences" with the retrieved sets of song landmarks and scored according to best fit. The song ID of the retrieved set with the "highest score is the winning song ID" and output on line 113 in Figure 2 of *Wang*. ([0061] of *Wang*). Once identified, *Wang* allows a user to perform purchasing transactions of the sounds relative to the winning song ID.

Thus, *Wang* introduces sampling of an unknown audio sample for fingerprints and landmarks to make a "linear correspondence" against known audio content in a database. In contrast, Claim 1 of the Application uses "a statistical pattern recognition scheme" to identify "at least one characteristic of the media content" in the broadcast.

The meaning of pattern recognition is clarified in paragraph [0070] of the Application which states:

> [0070] *Station recognition using audio pattern recognition.* One method would be to use pattern recognition techniques. A portable device could capture a segment of an audio broadcast. This segment could either be saved for future analysis, sent to a server, or analyzed locally. If it was analyzed locally, important features could be extracted from the data. Examples of 'features' would be spectral data, signal statistics, rhythm, tonality, etc. These features could then either be saved, or sent to the server in real-time. The benefit of extracting features is that the amount of data that either needs to be saved or transferred would be reduced. In addition to the actual data or features, the system requires the time at which the audio was captured, and the geographical region. Once the data/features were sent to a server, it would perform pattern recognition to determine which radio station the data matched with. This pattern recognition could use any of a number of modern techniques such as

> statistical pattern recognition, neural networks or fuzzy logic. The server would be constantly recording/buffering the audio from the broadcasts from the stations in the geographical region of interest. These data sets would be matched against the data recorded by the client. Additionally, other methods would be used to record the names of the songs played on the stations (most stations make this information available).

More specifically, "statistical pattern recognition" is only one of several modern techniques (*e.g.*, neural networks or fuzzy logic) that could be used for pattern recognition and is not the same as the linear correspondence analysis disclosed in *Wang*. Statistical pattern recognition assumes that each pattern is represented in terms of multiple features or measurements and is viewed as a point in a multi-dimensional space. The goal is to choose those features that allow pattern vectors belonging to different categories to occupy compact and disjoint regions in a multi-dimensional feature space. Thus, a discriminant function (e.g., quadratic) may be used in statistical pattern recognition, as stated in Claim 1, to form a decision boundary regarding a given sample that may be much more accurate than a "linear correspondence analysis" as described in *Wang*.

It is accordingly believed to be clear that the proposed combination of *Bates* and *Wang* neither shows nor suggests the features of Claim 1. Similar language is used in independent Claim 22 and independent Claim 26. Accordingly, withdrawal of the rejections under 35 U.S.C. § 103(a) to the Claims 1, 22, and 26 are respectfully requested.

Claims 2-5, 7-21, 23-25, 27 and 28

MPEP §2143.03 clarifies that if an independent claim is nonobvious under 35 U.S.C. § 103, then any claim depending therefrom is also nonobvious. (In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)). Accordingly, the dependent Claims 2-5, 7-21, and 23-25 are believed to be patentable as well because they all are ultimately dependent on Claim 1, which was previously shown to be nonobvious. Dependent Claims 27 and 28 are believed to be patentable as well because they all are ultimately dependent on nonobvious Claim 26. Accordingly, withdrawal of the rejections under 35 U.S.C. § 103(a) to Claims 2-5, 7-21, 23-25, 27 and 28 is also respectfully requested.

While the dependent Claims 2-5, 7-21, 23-25, 27 and 28 are believed to be patentable due to their dependence on the independent claims, the dependent claims also introduce new elements that Applicants believe make the dependent claims patentable for additional reasons as well.

For example, Claims 4 and 21 of the Application are distinctive over the cited references. More specifically, Claim 4 and Claim 21 of the Application specifically recite use of "**historical analysis of the media content associated with the connected broadcast transmission**" to help accomplish statistical pattern recognition. This combination of "historical analysis" with "the connected broadcast transmission" allows changes in user preferences to be immediately reflected.

In contrast, *Wang* provides "context free, convenient, fast, and noise immune" audio pattern recognition technology. ([0063 of *Wang*). More specifically, *Wang* indicates that being "context free" allows the technology to "not rely on the knowledge of the source of the broadcasting" when doing recognition. As such, the content analysis of *Wang* is intentionally free from association "with the connected broadcast transmission" as recited in Claim 4 and 21.

In further contrast, the monitoring task 130 of *Bates* uses the secondary tuner 32 to periodically scan the other stations relative to the current user preference criterion. (Col. 7, lines 1-13 of *Bates*). If the slice of periodic content from the station matches a user preference then a score for the station is increased, otherwise the station score decreases. (Col. 7, lines 35-60 of *Bates*). Falling below a threshold value may result in the station being dropped from a list of potential favorite stations, while exceeding the same threshold may result in the station being added to the favorite station list. (Col. 7, lines 20-35 of *Bates*). As such, *Bates* does not provide for "historical analysis of the media content associated with the connected broadcast transmission" as recited in Claim 4 and Claim 21, but rather only provides a station score that is based on content matching a user preference.

More specifically, there is no possibility of conducting a historical analysis of media content as the only retained data in *Bates* is the station score for determining relevancy of the station to current user preference criterion. Moreover, should user preferences change (e.g.,

addition of an artist or song OR removal of an artist or song), there would be no way to modify the previous station score of *Bates* to reflect the new user preferences. In essence, any change to the user preferences (*e.g.,* addition, removal, or altered prioritization of potential media content) would immediately invalidate all of the collected station scores of *Bates* and would require additional monitoring of all the stations to re-establish valid station scores. Whereas, a "historical analysis of the media content associated with the connected broadcast transmission", in accordance with Claim 4 and Claim 21 of the Application, might be immediately conducted to reflect the new user preferences.

Clearly, *Wang* provides "context free" analysis and expressly excludes "historical analysis of the media content associated with the connected broadcast transmission" as recited in Claim 4 and Claim 21 of the Application. Applicants also respectfully submit that "the monitoring task 130" of *Bates* does not overcome the previously described deficiency of *Wang* with respect to Claims 4 and 21 and so the claims are both therefore believed to be patentable over the cited art. Accordingly, withdrawal of the rejections under 35 U.S.C. § 103(a) to the Claims 4 and 21 are respectfully requested.

Claim 5 of the Application is also distinctive over the cited references and provides a further example that the dependent claims introduce new elements that Applicants believe make the dependent claims patentable for additional reasons as well. More specifically, while Claim 5 is dependent on the "**historical analysis**" mentioned in Claim 4 of the Application, it also specifically recites "**the pattern recognition scheme examines the audio portion of the audio portion of the media content**" in contrast to *Bates* and *Wang*. More specifically, *Wang* provides "context free" analysis and expressly excludes any "historical analysis" and *Bates* does not include an examination of the audio portion of the media content. Rather, *Bates* increments or decrements a station score to determine historical relevancy of the station to user preference criterion. *Bates* cannot examine "**the audio portion of the audio portion of the media content**" in a historical analysis as recited in Claim 5. Accordingly, withdrawal of the rejections under 35 U.S.C. § 103(a) to the Claim 5 is respectfully requested.

Claim 18 of the Application is also distinctive over the cited references and provides yet another example that the dependent claims introduce new elements that Applicants believe make the dependent claims patentable for additional reasons as well. More specifically, Claim 18 specifically recites "**recording the broadcast transmission** associated with the certain type of characteristic **when the at least one characteristic of the media content** associated with each connected broadcast transmission **is determined to be within the preferred media content parameters**." in contrast to *Bates* and *Wang*. More specifically, *Wang* explicitly teaches against recording the broadcast transmission in paragraph [0008] by stating, "even if the listener were to begin recording the song at the moment he decides he wishes to know the identity of the song, the sample would be relatively short and possibly noisy depending on the quality of the audio recording and recording environment." This inability to record the entire song is due in part to the fact *Wang* provides "context free" analysis to identify pre-recorded sounds, but does not monitor an active channel and expressly excludes any "historical analysis" that might allow recording of the "broadcast transmission" from the start of the song. Even the saved data mentioned in paragraphs [0039]-[0040] of *Wang* are limited to acquisition before analysis (pre-recorded) or acquisition after the fact, but not "**recording the broadcast transmission**" as recited in Claim 18. *Bates* does not overcome this deficiency. Rather, *Bates* only retains a list of favorite stations, songs, artists, or genre, but not the actual media content. Clearly, the proposed combination of *Wang* and *Bates* does not record "**the broadcast transmission…when the at least one characteristic of the media content…is determined to be within the preferred media content parameters**." as recited in Claim 18. Accordingly, withdrawal of the rejections under 35 U.S.C. § 103(a) to the Claim 18 is respectfully requested.

Conclusion

For at least the reasons above, Applicants respectfully submit that all pending claims are allowable and request that the Examiner permit these claims to proceed to issuance. Although additional arguments are believed to exist for distinguishing the cited documents,

the arguments presented are believed sufficient to address the Examiner's rejections. Likewise, failure of the Applicants to respond to a position taken by the Examiner is not an indication of acceptance or acquiescence of the Examiner's position. Instead, it is believed that the Examiner's positions are rendered moot by the foregoing arguments, and it is therefore not believed necessary to respond to every position taken by the Examiner with which Applicants do not agree.

The Examiner is respectfully requested to contact the undersigned at the telephone number below if there are any remaining questions regarding this application.

We believe the appropriate fees accompany this transmission. If, however, insufficient fee payment or fee overpayment occurs, the amount may be withdrawn or deposited from/to ÆON Law's deposit account. The deposit account number is 50-4051.

Respectfully submitted,

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